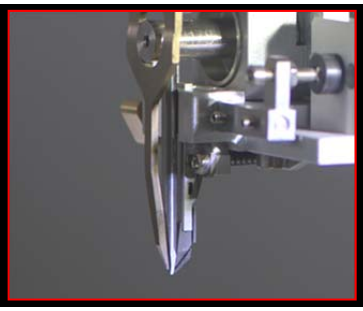
BONDiNG THE STARS



5350HRC

Manual Heavy Ribbon Bonder

The latest addition to our highly successful 5300 manual bonder family, the 5350HRC bond head for heavy ribbon and copper wire is ideally suited for R&D labs, prototype and pilot production as well as repair facilities who only have limited budgets but need highest bond quality. It puts the cutting-edge technologies of bonding heavy aluminium ribbon or copper wire within reach for everybody.

Heavy Al ribbon and Cu wire are much stiffer than standard Al heavy wire, so we developed a wire guide with integrated, programmable clamp to ensure consistent loop shape and reproducible cutting even for stiff and hard materials. Secondly, the maximum available bond force has been increased to 4000 cN which allows bonding Al heavy ribbon up to a size of 2000 x 300 µm.

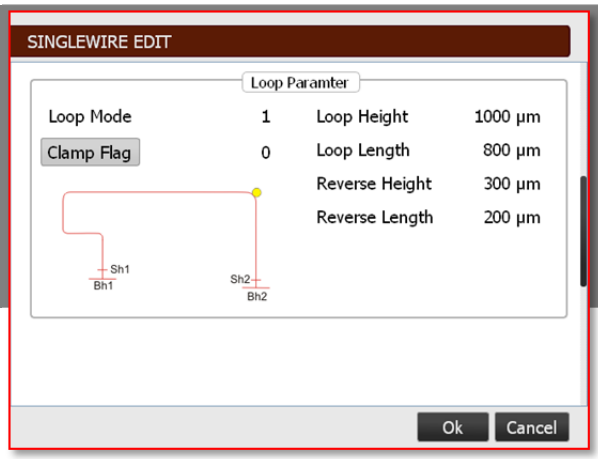
All other aspects are identical to the revolutionary 5350 standard heavy wire bonder, like the full-blown automatic wire cutting unit which guarantees perfectly reproducible wire cuts at single-micron precision without any risk of component damage. Thanks to a motorized Y-axis of 25 mm travel in addition to the motorized Z axis, it also ensures perfectly identical bond tails through a programmable, automatic step-back. The bond head can be exchanged for any other 5300 bond head within minutes.

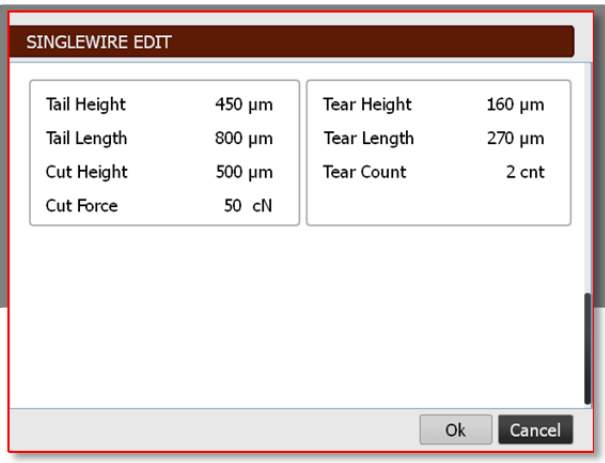
Bond tools are identical to those used on fully automatic wire bonders from F&K Delvotec: bond wedges of 2" length permit access even to large and deep housings used in automotive electronics. The patented self-adjusting wire guides make changing wire sizes literally a snap.

Even complicated loop forms including reverse loops or stitch bonds are easily executed with minimum operator influence. Uncommonly for a manual bonder, all parameters are programmed and saved on the internal hard disk, supported by a LCD colour display and our popular shuttle wheel which is quick and intuitive to handle.

The 5300 family software boasts several operating modes from a fully manual step-by-step mode to a production mode where the operator only has to move to the bond positions and then executes the bond by pushing a single button. Operator influence on bond quality is minimal.

Only a minimum of training is required, and the hard- and software basis of the entire 5300 family is identical. This keeps training and maintenance cost extremely low. At the same time, the bond head is almost identical to that of the fully automatic bonders from F&S BONDTEC, ensuring bonds of the highest quality and making scale-up to larger production volumes trouble-free.





Bond System

Wire types	Copper wire 300 ... 500 µm on 4" spool Aluminium ribbon up to 2000 x 300 µm
Bond head	Wedge-wedge for heavy wire and ribbon Standard wedges of 2" length
	90° wire guide with programmable clamp snap-in wireguide and quick-change cutter
	Bond force programmable up to 4000 cN; voice-coil system and mechanical pre-load
Ultrasonic System	proprietary 60 kHz system; optional digital generator with programmable frequency

Control System

Hardware	Single-board PC with Windows operating system VGA colour display 10,4" simple and rapid operation and programming through shuttle-wheel with push-button
Control modes	manual, semi-auto production mode program line-step for testing
Loop types	Standard rectangular, reverse, stitch, all programmable

Mechanics

Motion system	Programmable linear Z-axis with 60 mm travel; step resolution 1 µm Programmable linear Y-axis with 25 mm travel; step resolution 3 µm
Manipulator	in X and Y, working range 18x18 mm stepdown ratio 1:7
Substrate holder	standard 80 mm Ø for parts up to 2"x2" optionally 4"x4" and 95 mm Ø, also with vacuum

General

Dimensions	W x D x H 630 x 580 x 400 mm, approx. 40 kg
Supplies	100...240 V 50/60 Hz, single-phase, max. 230 VA Ø 6 mm standard vacuum tubing

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